

CLAIMS

1. An optical transceiver module comprising:
an approximately box-shaped package, having a transceiver chamber inside;

5 first and second metal plates, provided separately and independently of each other in the transceiver chamber of the package;

~~a first substrate, provided on the first metal plate,~~
the first substrate mounting a light emitting device;

10 a second substrate, provided on the second metal plate, the second substrate mounting a photodetector;

an optical waveguide, optically coupled to the light emitting device and the photodetector; and

a plurality of leads provided in the package, the leads
15 providing electric connection between each electrode of the light emitting device and the photodetector and the exterior of the package.

2. The optical transceiver module according to claim 1,
20 wherein the package is formed of a resin.

3. The optical transceiver module according to claim 1 or 2, wherein a capacitor is included between the second metal plate and the cathode terminal of the photodetector, the
25 capacitor electrically connecting the second metal plate and

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the cathode terminal of the photodetector.

4. The optical transceiver module according to any one of claims 1 through 3, wherein the specific resistance value of the first substrate mounting the light emitting device is $1 \text{ k}\Omega \cdot \text{cm}$ or above.

5. The optical transceiver module according to any one of claims 1 through 4, wherein at least either the first and the second metal plates is connected to a ground external to the package via the either lead.

6. The optical transceiver module according to any one of claims 1 through 5, wherein a preamplifier is mounted on the second metal plate and that electrical connection is established between the anode terminal of the photodetector and the input terminal of the preamplifier and between the output terminal of the preamplifier and any one of the leads.

7. The optical transceiver module according to any one of claims 1 through 6, wherein the package has a through hole across the floor of the transceiver chamber and the bottom surface of the package and at least either the first or the second metal plate is electrically conducted to the bottom surface of the package via the bottom surface of the metal plate and the through

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hole.

8. The optical transceiver module according to any one of claims 1 through 7, wherein a boundary part where the first
5 and the second metal plate adjacently surface each other has a shape of cranks supplementing each other or a curve.

~~9. The optical transceiver module according to any one of~~
claims 1 through 8, wherein the package has part of the
10 transceiver chamber has an opening that is open outside and the opening is closed with a lid formed of a metal or ceramic.

10. An optical transceiver mounting the optical transceiver module according to any one of claims 1 through 9, wherein the
15 substrate mounting the package of the optical transceiver module has an area lacking a conduction pattern in its area on the top surface thereof where the bottom surface of the package is in contact.

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